

EXTRACT ASHITABA (*Angelica keiskei*) IMPROVING THE IMMUNE RESPONSE IL-2 BALB/C MICE VACCINATED WITH RABIES VACCINE

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ABSTRACT

Ashitaba plant (*Angelica keiskei*) is native to Japan that has been developed in Indonesia, has many benefits, as a vegetable and as an immunomodulator. This study aims to determine the ethanol extract effect of Ashitaba leaves (*Angelica keiskei*) to increase immune response IL-2. Balb/C mice were vaccinated with rabies vaccine. Treatment consisted of six points: without Ashitaba (control), giving a dose of 100 Ashitaba; 200; 300; 400, and 500 mg / kg orally for 21 days. Each treatment was repeated four times, so there are 24 units for researching. On the 28th day, do the vaccination with rabies vaccine to all groups of mice. On 49th day, the spleen was taken for viewing cultured lymphocytes producing cells. Variables observed are the levels of IL-2 levels of the lymphocyte. The results showed that the extract of Ashitaba can increase levels of IL-2 were significantly ($P < 0.05$). Respectively, the average levels of interleukin-2 after treatment Ashitaba extract dose 0; 100; 200; 300; 400, and 500 mg/kg are 1,700; 3.919; 5.218; 8.875; 15.563. The conclusion, Ashitaba ethanol extract can improve the immune response of IL-2 and IFN- γ mice vaccinated with rabies vaccine.

Keywords: Ashitaba; Interleukin-2; Immune; lymphocyte

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PENDAHULUAN

Ashitaba yang mempunyai nama ilmiah *Angelica keiskei koidzumi*, mempunyai multikhasiat, seperti antioksidan dan ampuh mengatasi kanker seperti yang dibuktikan oleh penelitian Okuyama, *et al.*, (2007), peneliti di Fakultas Farmasi di *Meiji University*, Jepang dengan memberikan ekstrak Ashitaba pada tikus pengidap kanker paru dan kanker kulit. Enam bulan berselang, pertumbuhan kanker paru dan kanker kulit berhenti. Hasil ini diperkuat oleh riset Kimura dan Baba (2003) di Fakultas Kedokteran, *Ehime University*, Jepang. Ia memberikan ekstrak akar Ashitaba 100 mg per kg berat badan tikus penderita tumor paru. Pertumbuhan tumor itu terhambat dan tidak terjadi metastasis ke jaringan lain. Senyawa aktif yang berperan menghambat tumor itu *xanthoangelol*, yang menghambat sintesis DNA pada sel-tumor. *Xanthoangelol* juga terbukti ampuh mengobati neuroblastoma atau kanker saraf dan leukemia.